

TECHNICAL REVIEW: AIR PERMIT BY RULE

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|---------------------|--------|----------------------|--|----------------------|---------------------------|
| Permit No.: | 147140 | Company Name: | Building Materials Investment Corporation | APD Reviewer: | Amber Huddle |
| Project No.: | 278775 | Unit Name: | GAF Materials Revision: Add Adhesive Storage Tank | PBR No(s).: | 106.261, 106.262, 106.472 |

| GENERAL INFORMATION | | | |
|--------------------------------|-----------------------|-----------------------------------|----------------------------|
| Regulated Entity No.: | RN100788959 | Project Type: | Permit by Rule Application |
| Customer Reference No.: | CN605251487 | Date Received by TCEQ: | December 6, 2017 |
| City/County: | Dallas, Dallas County | Date Received by Reviewer: | December 8, 2017 |
| Physical Location: | 2600 Singleton Blvd | | |

| CONTACT INFORMATION | | | | | |
|--|--|-------------------|--------------|---------------|-------------------|
| Responsible Official/ Primary Contact Name and Title: | Mr. Bruce Dahlgren Plant Manager | Phone No.: | 214-637-8970 | Email: | BDAHLGREN@GAF.COM |
| Technical Contact/ Consultant Name and Title: | Mr. Kevin Bush Environmental Engineer | Phone No.: | 214-637-8933 | Email: | KBUSH@GAF.COM |

| GENERAL RULES CHECK | YES | NO | COMMENTS |
|---|-----|----|---|
| Is confidential information included in the application? | X | | Confidential information included in application |
| Has the PBR fee been paid? | X | | Voucher no. 343838 |
| Is this registration certified? | X | | PI-7 CERT |
| Is this an APWL site? | | X | |
| Are there any upstream or downstream affects associated with this registration? | | X | |
| Is planned MSS included in the registration? | | X | |
| Are there affected NSR or Title V authorizations for the project? | X | | NSR Permit no. 7711A, Standard Permit No. 91414, O-2771 |
| Is each PBR > 25/250 tpy? | | X | |
| Are PBR sitewide emissions > 25/250 tpy? | | X | N/A – Site has been to public notice |
| Are there permit limits on using PBRs at the site? | | X | |
| Is PSD or Nonattainment netting required? | | X | Project emissions are below netting thresholds |
| Do NSPS, NESHAP, or MACT standards apply to this registration? | | X | |
| Does NOx Cap and Trade apply to this registration? | | X | Not located in HGB |
| Is the facility in compliance with all other applicable rules and regulations? | X | | |

| DESCRIBE OVERALL PROCESS AT THE SITE |
|---|
| GAF is a nationwide manufacturer of building material products. The GAF Dallas Plant manufactures asphalt shingles for the roofing industry. There are two asphalt roofing lines at the GAF Dallas Plant: Line 1 and Line 3. Self-seal asphalt based dots are applied to the asphalt roofing sheets before they are cut into shingles and automatically packaged. Adhesive stripes are applied to the laminated shingles in Line 3 before the shingles are cut and packaged. The existing Line 3 sealant application system is installed to apply self-seal asphalt and laminate self-seal asphalt to the asphalt roofing sheets. The Line 3 sealant application system includes one new Line 3 sealant run tank (Facility Identification Number [FIN]: T-22), associated self-seal applicator (FIN: SEALAP), laminate self-seal applicator (FIN: SEALAP), and a Heatec heater (FIN: HTR9). |

| DESCRIBE PROJECT AND INVOLVED PROCESS |
|---|
| Building Materials Investment Corporation, doing business as GAF Materials Corporation (GAF) has submitted a PI-7 CERT through ePermits to revise Permit no. 147140 for their asphalt roofing production facility located in Dallas As part of the PBR Revision Application, GAF proposes to install the 3120 Adhesive Storage Tank (FIN: TK-AD [authorized under §106.472]) for the existing Line 3 sealant application. The proposed 3120 Adhesive Storage Tank will also feed the existing self-seal applicator and laminate self-seal applicator to apply dots/stripes to the shingles system (authorized under §106.261 and §106.262). The Line 3 Heatec heater (FIN: HTR9) authorized under PBR 106.183 that is currently used to provide heat required by the Line 3 sealant application system will be decommissioned as part of this project. The Line 3 sealant application system will utilize the heat from the existing Line 1 Heatec heater (FIN: HTR1) claimed under PBR §106.183. No changes are proposed to the existing Line 3 sealant run tank. Currently, the Line 3 sealant run tank, self-seal applicator, and the laminate self-seal applicator are controlled by the Line 3 Mist Elimination System (Emission Point Number [EPN]: CFL2). The emissions from the proposed 3120 Adhesive Storage Tank will also be routed to the Line 3 Mist Elimination System (EPN: CFL2) for control. GAF does not expect any increase in actual emission increases from upstream or downstream processes as a result of the proposed project. |

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TECHNICAL SUMMARY - DESCRIBE HOW THE PROJECT MEETS THE RULES

PBR 106.261/262 Compliance Demonstration

- The emission point(s) associated with the facilities or changes to facilities are located at least 450 ft. from the nearest off-site receptor.
- The total new or increase emissions will comply with the applicable hourly and annual emission limits as represented in the table below.
- There are no changes to or addition of any pollution abatement equipment.
- Visible emissions to the atmosphere, from any point or fugitive source, do not exceed 5.0 opacity in any six-minute period.
- This registration is not for authorization for construction or to change a facility authorized under another section of this chapter or under standard permit.

§106.472 Organic and Inorganic Liquid Loading and Unloading

Liquid loading and unloading equipment are permitted by rule, provided that no visible emissions result, and the chemical is limited to asphalt.

| PBR 106.261(2) | | | | | | | |
|------------------------|-------------------------|-----------|----------|-----------------------|------------|-------------------------|------------|
| Air Contaminant | | | | Emission Limit | | Actual Emissions | |
| | | | | lb/hr | tpy | lb/hr | tpy |
| CO | | | | 6.00 | 10.00 | 0.01 | 0.02 |
| PBR 106.262 | | | | | | | |
| Air Contaminant | L | D | K | Emission Limit | | Actual Emissions | |
| | mg/m³ | ft | | lb/hr | tpy | lb/hr | tpy |
| Asphalt Fume (VOC) | 5 | 450 | 92.5 | 0.05 | 0.24 | 0.02 | 0.08 |
| Asphalt Fume (PM) | 5 | 450 | 92.5 | 0.05 | 0.24 | <0.01 | <0.01 |
| PBR 106.261(3) | | | | | | | |
| Air Contaminant | | | | Emission Limit | | Actual Emissions | |
| | | | | lb/hr | tpy | lb/hr | tpy |
| Carbonyl Sulfide | | | | 1.00 | 4.38 | <0.01 | <0.01 |

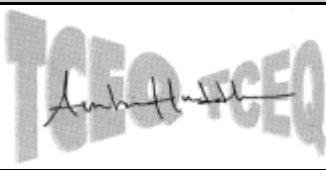

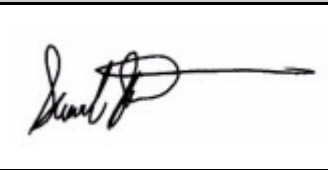
ESTIMATED EMISSIONS

| EPN / Emission Source | VOC | | CO | | PM | | PM₁₀ | | PM_{2.5} | | H₂S | | Carbonyl Sulfide | |
|---|---------------|-------------|---------------|-------------|---------------|-----------------|------------------------|-----------------|-------------------------|-----------------|-----------------------|-------------|-------------------------|-----------------|
| | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy |
| CFL2 / Line 3 Sealant Adhesive System – Mist Elimination System | 0.98 | 0.58 | 0.06 | 0.05 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.03 | 0.02 | <0.01 | <0.01 |
| TOTAL EMISSIONS (TPY): | | 0.58 | | 0.05 | | <0.01 | | <0.01 | | <0.01 | | 0.02 | | <0.01 |

COMMUNICATION LOG

| Date | Time | Name/Company | Subject of Communication |
|-------------|-------------|------------------------|---|
| 1/2/2018 | Morning | Ms. Lele Bao / Trinity | Phone/Email: Reviewer called to request an updated emission summary table or 261/262 table. There is a discrepancy between the two. Ms. Bao provided updated 261/262 table. |

| SITE REVIEW/DISTANCE LIMIT | Y | N | Description/Outcome | Date | Reviewed by |
|-----------------------------------|----------|----------|----------------------------|-------------|--------------------|
| Site Review Required? | | X | No site review required. | 1/2/2018 | Amber Huddle |
| PBR Distance Limits Met? | X | | Distance limits are met. | | |

| | TECHNICAL REVIEWER | PEER REVIEWER | FINAL REVIEWER |
|----------------------|---|--|---|
| SIGNATURE: |  |  |  |
| PRINTED NAME: | Ms. Amber Huddle | Mr. John Bregger | Mr. Samuel Short, Manager |
| DATE: | January 3, 2018 | January 3, 2018 | January 5, 2018 |